

AMENDMENTS TO THE CLAIMS

1. (Canceled)
2. (Currently Amended) A power steering pump in accordance with claim 11 wherein the flow control valve slides axially to vary the size to the inlet and to regulate fluid flow into the fluid bypass port.
3. (Canceled)
4. (Currently Amended) A power steering pump in accordance with claim 11 wherein the spring urges the flow control valve to open the inlet of the bypass port ~~further comprising means for biasing the valve in the open position.~~
5. (Currently Amended) A power steering pump in accordance with claim 11 further comprising pumping elements disposed within the housing, said pumping elements comprising a cam chamber and a rotor having retractable vanes disposed within the cam chamber.
6. (Canceled)
7. (Currently Amended) A power steering pump in accordance with claim 6 12 wherein the pumping elements comprise a cam chamber and a rotor having retractable vanes disposed within the cam chamber.
8. (Currently Amended) A power steering pump in accordance with claim 7 12 wherein the spring urges the flow control valve to open the inlet of the bypass port ~~the means comprises a coil spring.~~
9. (Canceled)

10. (Currently Amended) A power steering pump in accordance with claim 9 ~~13~~ wherein the ~~extension~~ sleeve includes an end cap, and wherein plunger includes a rear end adjacent the end cap and a pressure equalization passage extending from the rear end and communicating through the hollow rod with the bore fluid adjacent the flow control valve.

11. (New) A power steering pump comprising:

a housing including a bore having an axis, a first bore end and a second bore end, the housing including a fluid discharge port communicating with the bore at a first axial location, a fluid bypass port at a second axial location and including an inlet communicating with the bore at a second axial location, and an fluid outlet passage communicating with the bore and located at the first end;

a flow control valve located in the bore and axially displaceable along the axis to open the inlet, to close the inlet, and to adjust the size of the inlet through which flow can enter the bypass port from the bore;

a sleeve secured to the housing at the second bore end and extending along the axis away from the housing;

a plunger located in within the sleeve and axially displaceable along the axis;

a spring including a first end and a second end axially opposite the first end, located in the sleeve, seated against displacement relative to the housing at the first end and seated against the plunger at the second end; and

an electromagnetic coil for actuating the plunger to move the flow control valve along axis.

12. (New) A power steering pump comprising:

a housing including a bore having an axis, a first bore end and a second bore end, the housing including a fluid discharge port communicating with the bore at a first axial location, a fluid bypass port at a second axial location and including an inlet communicating with the bore at a second axial location, and an fluid outlet passage

communicating with the bore and located at the first end;

pumping elements located within the housing and communicating with the fluid bypass port, for pumping fluid to the fluid discharge port;

a flow control valve located in the bore, and axially displaceable along the axis to open the inlet, to close the inlet, and to adjust the size of the inlet through which flow can enter the bypass port from the bore;

a sleeve secured to the housing at the second bore end and extending along the axis away from the housing;

a spring including a first end and a second end axially opposite the first end, located in the sleeve, seated against displacement relative to the housing at the first end and seated against the actuator at the second end;

an electromagnetic coil for producing an electromagnetic field; and

a plunger contacting the flow control valve, located within the sleeve, and axially displaceable along the axis in response to the electromagnetic field and a force produced by the spring, for moving the flow control valve along the axis.

13. (New) A power steering pump comprising:

a housing including a bore having an axis, a first bore end and a second bore end, the housing including a fluid discharge port communicating with the bore at a first axial location, a fluid bypass port at a second axial location and including an inlet communicating with the bore at a second axial location, and an fluid outlet passage communicating with the bore and located at the first end;

a flow control valve located in the bore and axially displaceable along the axis to open the inlet, to close the inlet, and to adjust the size of the inlet through which flow can enter the bypass port from the bore;

a bracket secured to the second bore end and formed with an axial passage and a second bore;

a sleeve secured to the bracket, located in the second bore, and extending along the axis away from the housing;

a hollow rod secured to the flow control valve, extending through the axial

passage of the bracket and into the sleeve, providing an annular space between the sleeve and a radial outer surface of the rod;

a plunger located within the sleeve, contacting an axial end of the rod, and axially displaceable along the axis;

a spring including a first end and a second end axially opposite the first end, located in the annular space, the first end seated on the bracket against displacement relative to the housing and seated against the plunger at the second end; and

an electromagnetic coil for producing an electromagnetic field, the plunger being axially displaceable along the axis in response to the electromagnetic field and a force produced by the spring for moving the flow control valve with respect to the inlet.

14. (New) The power steering pump of claim 13 further comprising pumping elements disposed within the housing, said pumping elements comprising a cam chamber and a rotor having retractable vanes disposed within the cam chamber.